CLAIMS

What is claimed is:

1. A self-cleansing system comprising:

    a) at least two subsystems, said at least two subsystems including an active subsystem and at least one available inactive subsystem;

    b) a communications link connecting said at least two subsystems;

    c) a local network capable of connecting said at least two subsystems to an external network;

    d) an arbitration mechanism capable of designating one of said at least one available inactive subsystem to be a designated active system;

    e) an IP address shared by at least said active subsystem and said designated active subsystem, only said active subsystem utilizing said IP address to output information to said external network;

    f) a transfer mechanism capable of:

        i) deactivating said active subsystem, causing said active subsystem to become a deactivated subsystem; and

        ii) activating said designated active subsystem, causing said designated active subsystem to become said active subsystem; and

    g) a self-cleansing mechanism capable of cleansing said deactivated subsystem, causing said deactivated subsystem to become one of said at least one available inactive subsystem.

2. A system according to claim 1, wherein said arbitration mechanism uses a criterion to select which of said at least one available inactive subsystem is to be designated said designated active subsystem.

3. A system according to claim 1, wherein said transfer mechanism is activated by a transfer criterion.

4. A system according to claim 3, wherein said transfer criterion is a fault detection criterion.

5. A system according to claim 3, wherein said transfer criterion is an intrusion detection criterion.

6. A system according to claim 3, wherein said transfer criterion considers time.

7. A system according to claim 1, wherein at least two of said at least two subsystems are firewalls.

8. A system according to claim 1, wherein at least two of said at least two subsystems are servers.

9. A system according to claim 1, wherein at least two of said at least two subsystems are gateways.

10. A system according to claim 1, further including an integrity check capability.

11. A system according to claim 1, further including an audit capability.

12. A system according to claim 1, wherein said self-cleansing mechanism includes a capability to reboot at least one of said at least two subsystems.

13. A system according to claim 1, further including shared storage accessible by at least two of said at least two subsystems.

14. A system according to claim 1, wherein said communications link is part of said local network.

15. A system according to claim 1, wherein said active subsystem is a plurality of active subsystems.

16. A method of self-cleansing a system comprising the iterative steps of:

   a) designating one of at least one available inactive subsystem to be a designated active subsystem, said at least one available inactive subsystem being part of at least two subsystems, said at least two subsystems:

      i) include an active subsystem;

      ii) are connected by a communications link;

      iii)   are capable of sharing an IP address; and

      iv)   are connected to a local network that is capable of connecting to an external network;

  b) when a transfer criterion is satisfied:

      i)   deactivating said active subsystem, causing said active subsystem to become a deactivated subsystem; and

      ii)   activating said designated active subsystem, causing said designated active subsystem to become said active subsystem; and

  c) cleansing said deactivated subsystem, causing said deactivated subsystem to become one of said at least one available inactive subsystem;

wherein only said active subsystem utilizes said IP address to output information to said external network.

17. A method according to claim 16, wherein said step of designating one of at least two subsystems to be a designated active subsystem uses a criterion to select which of said at least one available inactive subsystem is to be designated said designated active subsystem.

18. A method according to claim 17, wherein said transfer criterion is a fault detection criterion.

19. A method according to claim 17, wherein said transfer criterion is an intrusion detection criterion.

20. A method according to claim 17, wherein said transfer criterion considers time.

21. A method according to claim 16, wherein at least two of said at least two subsystems are firewalls.

22. A method according to claim 16, wherein at least two of said at least two subsystems are servers.

23. A method according to claim 16, wherein at least two of said at least two subsystems are gateways.

24. A method according to claim 16, further including the step of checking the integrity of at least one of said deactivated subsystem.

25. A method according to claim 16, further including the step of auditing said system cleansing actions.

26. A method according to claim 16, wherein said step of cleansing said deactivated subsystem includes rebooting said deactivated subsystems.

27. A method according to claim 16, wherein said active subsystem is a plurality of active subsystems.

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